



CAREER OPPORTUNITY

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION (FRA)

ANNOUNCEMENT NUMBER: FRA-05-33R
POSITION TITLE: Mechanical Engineer
GS-830-14
GS-14: \$88,369 to \$114,882 per annum
Full Performance Level: GS-14
Note: This position has special job requirements.
See page 3.

POSITION LOCATION: Federal Railroad Administration
Office of Associate Administrator for Railroad
Development, Office of Research &
Development, Equipment & Operating Practices
Research Division
Washington, DC

AREA OF CONSIDERATION: Government Wide (Status Candidates Only.)
(Candidates eligible for special appointing authorities and for consideration
under the Career Transition Assistance Program and Interagency Career
Transition Assistance Program also may apply.)

OPENING DATE: 03-24-05

CLOSING DATE: 04-14-05

NUMBER AND TYPE: One Full-Time Permanent Position

Due to U.S. mail delays, it is recommended that applicants fax, use a professional delivery service (i.e., FedEx, UPS, etc.), email, or personally deliver applications to ensure timely receipt.

DOT is an Equal Opportunity Employer

All qualified applicants will be considered regardless of political affiliation, race, color, religion, national origin, sex, sexual orientation, marital status, age, disability, or other non-merit factors. DOT provides reasonable accommodations to applicants with disabilities. If you need a reasonable accommodation for any part of the application and hiring process, please notify us. Decisions on granting reasonable accommodation will be made on a case-by-case basis.

Why Work For Us? Transportation impacts every facet of American life, providing people access to work, school, loved ones, and nature's rich bounty. The U.S. Department of Transportation is committed to transportation excellence and strives to create the best possible integrated air, land, and sea transportation system for America. As a DOT employee, you will become a part of the dedicated workforce who works day-to-day to make measurable improvements in our transportation system, the security of our nation, and the quality of American life.

The Federal Railroad Administration, an Operating Administration under the Department of Transportation, was created to promote and enforce safety throughout the U.S. railroad system, rehabilitate the Northeast Corridor rail passenger services, consolidate Federal support for rail transportation, and support research and development for rail transportation for passengers, railroad employees and the general public.

Summary Of The Essential Job Functions: As a Mechanical Engineer, you will be required to:

- Conceive, formulate, propose, and plan advanced engineering studies including extensive research, development, demonstration, test, and evaluation programs and projects involving unprecedented and often controversial areas of investigation.
- Conduct, manage, and/or direct R&D investigations covering theoretical design of analysis methods and procedures for testing and evaluating the safety and performance of tank cars and other hazardous material rail vehicles.
- Provide technical management of R&D projects which include work at the Transportation Test Center, the Volpe National Transportation Systems Center, other Government organizations and laboratories, contractor facilities, and various universities.
- Select and prioritize research program elements within available resources as defined by the Division Chief, and make technical decisions to ensure that overall program and project scope, objectives, and requirements are met.
- Conduct detailed technical reviews of reports and literature from contractors, Government agencies and other research organizations, both domestic and foreign, and maintain cognizance over new developments and requirements.
- Prepare comprehensive reports and detailed evaluations of programs and projects; summaries of contract results, outcomes, and technical findings; program activity descriptions; and budgetary support documentation as required.
- Represent the Division or other higher authority in technical discussions within the Department, and with other Government agencies, universities, foreign government agencies, and the railroad industry as required.
- Serve as a member on intra-agency and inter-agency panels and on Government-industry panels or boards, furnishing expert advice and representation in his/her specialized field.
- Furnish expert testimony at hearings on matters pertaining to the programs/projects managed.
- Prepare articles for technical journals and periodicals when appropriate.
- Prepare all technical aspects of procurement documentation including development of statements of work and technical specifications involving the estimation of design parameters for equipment and component systems and subsystems.

- Serve as a Contracting Officer's technical representative on a variety of contracts, with authority to monitor and provide technical and programmatic direction to contractors.
- Conduct on-site visits to ensure that technical and management efforts are of high quality and in compliance with contract provisions and program policies and objectives.
- Provide quick response capability to resolve unanticipated safety research needs as identified by the Congress, the National Transportation Safety Board, and the FRA Office of Safety Enforcement in the areas of vehicles and components.
- Serve as team leader in providing administrative direction to other research personnel in certain assigned research management tasks where an ad hoc team approach has been established.

What Are The Minimum Qualifications For This Position?

Basic Requirements:

A: Degree: professional engineering. To be acceptable, the curriculum must: (1) be in a school of engineering with at least one curriculum accredited by the Accreditation Board for Engineering and Technology (ABET) as a professional engineering curriculum; or (2) include differential and integral calculus and courses (more advanced than first-year physics and chemistry) in five of the following seven areas of engineering science or physics: (a) statics, dynamics; (b) strength of materials (stress-strain relationships); (c) fluid mechanics, hydraulics; (d) thermodynamics; (e) electrical fields and circuits; (f) nature and properties of materials (relating particle and aggregate structure to properties); (g) any other comparable area of fundamental engineering science or physics, such as optics, heat transfer, soil mechanics, or electronics.

OR

B: Combination of education and experience-college-level education, training, and/or technical experience that furnished: (1) a thorough knowledge of the physical and mathematical sciences underlying professional engineering, and (2) a good understanding, both theoretical and practical, of the engineering sciences and techniques and their applications to one of the branches of engineering. The adequacy of such a background must be demonstrated by one of the following: (1) current registration as a professional engineer by any state, the District of Columbia, Guam, or Puerto Rico; (2) evidence of having successfully passed the Engineer-in-Training examination, or the written test required for professional registration, which is administered by the Boards of Engineering Examiners in various states, the District of Columbia, Guam and Puerto Rico; (3) successful completion of at least 60 semester hours of courses in the physical, mathematical, and engineering sciences and in engineering, or (4) successful completion of a curriculum leading to a bachelor's in engineering technology or in an appropriate professional field.

In addition to meeting the basic qualification requirements listed above, you must have at least one year of specialized experience in or directly related to the essential job functions described above. For Federal employees this experience must have been at the next lower grade level. If you want us to consider experience you obtained outside the Federal Government, it must have been at that same level of complexity. Qualifications and time-in-grade requirements must be met by the closing date of the announcement.

Specialized experience is experience that equipped the applicant with the particular knowledge, skills and abilities to perform successfully the duties of the position to be filled. The specialized experience should clearly demonstrate that the candidate possesses the knowledge, skills, abilities and other characteristics (KSAOCs) required by this position which are listed below.

What Are The Required Knowledge, Skills And Abilities For This Job?

- Knowledge of the engineering principles related to hazardous materials transportation, especially tank car safety.
- Knowledge of railroad operations.
- Ability to solve a variety of highly complex engineering problems.
- Ability to conduct research programs, develop program plans, budgets, and procurement Statements of Work.
- Ability to form effective partnerships among organizations and individuals with a wide variety of professional and institutional backgrounds.
- Ability to clearly and effectively express ideas and recommendations one on one and in group settings and to clearly and effectively communicate and deliver presentations to a wide variety of audiences.
- Ability to clearly and effectively express ideas and recommendations in writing.

How Will The Qualified Applicants Be Further Evaluated And Rated To Identify The Best Qualified?

If you are basically qualified for this job, you will be further evaluated on the quality and extent of your total accomplishments, experience and education related to the knowledge, skills and abilities listed above. We also may consider your performance appraisal, awards, and relevant training. Your ranking will measure the degree to which your background matches the demands of this position.

What Employee Benefits Do We Provide? The Federal Government offers excellent benefits, flexible work schedules and family-friendly programs. You will receive paid annual leave and sick leave. This is a permanent position and you will be eligible for retirement, health insurance, life insurance and Long Term Care insurance. A brief summary of the Federal benefits for permanent employees can be found at www.usajobs.opm.gov/EI61.htm.

Before You Go Any Further, Here Are Some Other Things You Need to Know

- United States citizenship is required. (Proof of citizenship will be required to be shown upon appointment.)
- If you are a male between the ages of 18 and 26 or were born after December 31, 1959, certification is required at the time you are employed that you have registered with the Selective Service for the draft, unless Selective Service has approved a waiver for you.
- Applicants must meet the qualification requirements by the closing date of the announcement. Federal applicants also must meet time-in-grade requirements by the closing date.
- If you are selected or among the best qualified candidates for this position, you will be subject to a determination of your suitability for Federal employment.

- Before being hired you will be required to sign and verify the accuracy of the information in your application if you have not done so using an application form such as the OF 612.
- If an FRA employee is selected, travel and transportation expenses will be paid if the selection results in a promotion OR for a geographical reassignment if the FRA selectee occupies a position that has significantly different duties from that of this position vacancy. If a candidate outside FRA is selected, travel and transportation expenses will not be paid.
- The FRA has determined that seniority rights/reemployment rights and leaves of absence from railroads constitute an actual or an appearance of a conflict of interest. Therefore, if the individual selected for a position is already an FRA employee who has reemployment rights which will create a conflict of interest in this position, she/he will be required to divest any reemployment rights held before the selection is finalized. If an FRA employee is selected who has reemployment rights that will not create a conflict of interest in the position, the employee may retain these rights as long as the conflict does not exist.
- FRA employees are prohibited from owning railroad stock, except, under certain circumstances, as part of a diversified mutual fund.
- If selected, you will be subject to the Standards of Ethical Conduct applicable to all DOT employees.
- Applicants with “competitive status” as current or former Federal Government employees may be given first consideration.
- Veterans who are preference eligibles or who have been separated from the armed forces under honorable conditions after 3 years or more of continuous active service are eligible to apply.

How To Apply For This Position

- You must submit your current SF-171 (Application for Federal Employment), Resume, or an OF-612 (Optional Application for Federal Employment). You may choose which form to submit provided it contains all required information. Required information is listed in the section below labeled “Here’s What Your Application Must Contain.”
- For maximum consideration, tell us how you meet the "Knowledge, Skills and Abilities (KSAs)" for this position. The KSAs for this position are found above.
- For Federal applicants, a complete performance appraisal is required. It must be current – meaning it was issued to you within the past year – and it must be official – meaning it appraises your performance over a normal rating cycle in your present job and has been signed by your supervisor. If you are unable to submit your current performance appraisal, please tell us why. You also should submit a copy of your latest SF-50 "Notification of Personnel Action" that reflects career or career-conditional tenure.

- To be considered for selection priority under the Career Transition Assistance Program (CTAP) and/or the Interagency Career Transition Assistance Program (ICTAP), you must submit appropriate certification that you are eligible. In addition, you must be determined to be well-qualified for the position. **Well-qualified applicant:** An eligible applicant who meets all qualifications, standards, and eligibility requirements for the position, including medical qualifications; minimum educational and experience requirements; selective placement factors; knowledge, skills, and abilities (KSAs); quality ranking factors; and any other special qualifying conditions, and is able to satisfactorily perform the duties of the position upon entry.

Where To Send Your Application

- You may **mail or deliver** your application to the Federal Railroad Administration, Office of Human Resources, 1120 Vermont Avenue, NW., 6th Floor, Washington, DC 20590.
- If you are faxing your application, please limit the application to **a maximum of 20 pages** and include a cover sheet. Our fax number is (202) 493-6169. We will not accept applications faxed from a Federal Government fax machine.
- **ALL** applications must be in our office or postmarked by the closing date of the announcement.
- Applications mailed in a Government envelope will not be accepted.

HERE'S WHAT YOUR APPLICATION MUST CONTAIN

JOB INFORMATION

- Announcement number and title of the position

PERSONAL INFORMATION

- Full name
- Mailing address (with Zip Code)
- Social Security Number
- Country of citizenship (Most Federal jobs require United States citizenship)
- Veterans' preference
(**Proof Required – Attach DD 214**)
- Federal employees & Reinstatement eligibles (**Attach SF-50**)
- Highest Federal civilian grade held

EDUCATION

- High School name, city, state, and date of diploma or GED
- College/University names, city, and state
- Major(s)
- Type and year of degree(s) received

WORK EXPERIENCE

(paid and unpaid)

- Job Title
- Duties and accomplishments
- Employer's name and address (indicate if we may contact your current supervisor)
- Supervisor's name and telephone number
- Starting and ending dates (month and year)
- Hours per week
- Salary and/or Grade (GS-or equivalent)

OTHER QUALIFICATIONS

- Job-related training courses (title and year)
- Job-related skills (e.g., foreign languages, computer software/hardware, etc.)
- Job-related certificates and licenses (current only)
- Job-related honors, awards, and special accomplishments (e.g., memberships in professional or honor societies, leadership activities, public speaking, performance awards and publications) (give dates)

Privacy Act Requirements: The forms referenced in this announcement are used to determine applicants' qualifications for the position and are authorized under 5 U.S.C. 3302 and 3361.

Questions?

Call Renee Clark at (202) 493-6117 or TDD (202) 493-6487 or 6488, or email at renee.clark@fra.dot.gov. Please reference the announcement number so we can help you more efficiently.

Para mas informacion en espanol sobre este anuncio de vacante o cualquier otra information sobre empleo en las Federal Railroad Administration (FRA), por favor llame a Francisco Gonzalez 202/493-6076. La FRA es un empleador con igualdad de oportunidad en el empleo, y que por medio de programas de accion afirmativa mantiene un ambiente multicultural. Todos los que soliciten recibiran igual consideracion, sin ninguna excepcion, por raza, color, religion, sexo, origin nacional, politica, impedimento fisico o edad.

ALTERNATIVE FORMATS: If you need a copy of this announcement in an alternative format to accommodate a disability, please contact Marcella Mullins at marcie.mullins@fra.dot.gov, on (202) 493-6114 or at the TDD number (202) 493-6487 or 6488.

REASONABLE ACCOMMODATION: If you are requesting reasonable accommodation in connection with applying for this vacancy, please contact Marcella Mullins as listed above.